UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,564	08/15/2003	Satish Gadde	2003P11329US	6624

7590 03/21/2005

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
KIM, TAE JUN	
ART UNIT	**PAPER NUMBER**
3746	

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SW

Office Action Summary	Application No.	Applicant(s)	
	10/644,564	GADDE ET AL.	
	Examiner	Art Unit	
	Ted Kim	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-11,13-15 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-11, 13-15, 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 February 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Applicant's replacement sheets filed 2/1/05 have been received and are partially approved, i.e. Figs. 2, 3 are approved.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: C-stage (see Fig. 5) is not discussed in the specification or with respect to the other drawings. Corrected drawings and amendment to the specification are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. Applicant's replacement sheet eliminating the C-stage does not rectify the situation as the line for the C-stage would still occur and it remains unclear as to where or how the fuel is injected for the "C-stage."

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 15, 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention. Applicant claims the interface (see claim 15) is reduced between fuel and unfueled

regions. However, applicant has not provided any baseline configuration in the specification (see e.g. page 2, lines 5-13 and page 3, lines 3-11) for which the interface is reduced. It is not clear what type of prior art configuration applicant is comparing his invention with such that the claimed reduction can occur.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9-11, 13-15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-196941 in view of WO 98/25084 and Munro (5,884,483). JP '941 teaches a fuel system for a turbine engine, comprising: a first premix injector assembly comprising at least four injectors (see Fig. 3b), wherein at least first and second injectors of the at least four injectors 9a of the first premix injector assembly are positioned adjacent each other in the turbine engine and at least third and fourth injectors of the at least four injectors of the first premix injector assembly 9a are positioned adjacent each other in the turbine engine; a second premix injector assembly (see white injectors in Fig. 3b) comprising at least two injectors; wherein at least one injector forming the second premix injector assembly is positioned between the first injector and the fourth injector of the first premix injector assembly and at least one injector forming the second premix

injector assembly is positioned between the second injector and the third injector of the first premix injector assembly; and wherein the fuel system is capable of emitting fuel into the turbine engine through the first premix injector assembly without simultaneously emitting fuel into the turbine engine through the second premix injector assembly; the second premix injector assembly comprises at least four injectors (each nozzle has a valve 10), wherein at least first and second injectors of the at least four injectors are positioned adjacent each other in the turbine engine and at least third and fourth injectors of the at least four injectors are positioned adjacent each other in the turbine engine, wherein the first and second injectors forming a portion of the second premix injector assembly is positioned between the first injector and the fourth injector of the first premix injector assembly and the third and fourth injectors forming a portion of the second premix injector assembly are positioned between the second injector and the third injector of the first premix injector assembly. JP '941 teaches various aspects of the claimed invention including a pilot burner 7a but teaches using 6 premixing nozzles and not 8. WO 98/25084 teaches using 8 premixing nozzles 2, 3 which are staged. It would have been obvious to one of ordinary skill in the art to apply the staging of JP '941 to a premixing combustor with more burners. In such a scenario, in keeping with JP '941 burner distribution pattern, all the nozzles would be distributed in pairs. Optionally, Munro is cited as a teaching reference which shows that it is old and well known to distribute the premixers around the circumference in pairs as being equivalent to other patterns used for staging (col. 1, lines 16-29; col. 4, lines 6-17). It would have been

obvious to one of ordinary skill in the art to provide the burners in pairs, as taught by Munro, as a well known or equivalent pattern configuration of fuel injectors employed in the art for staging the fuel.

Response to Arguments

7. Applicant's arguments filed 2/1/05 have been fully considered and amend around the 102 rejections but they are not persuasive with respect to the 103 rejection.

8. Applicant's amendments regarding Figure 5 with regard to the C-stage would not resolve the problem. Applicant's replacement sheet eliminating the C-stage does not rectify the situation as the line for the C-stage would still occur and it remains unclear as to where or how the fuel is injected for the "C-stage."

9. As for the arguments regarding the enablement of the "interface between fueled and unfueled regions" being reduced, applicant's argument is essentially that he is not responsible for describing the state of the prior art. However, applicant is responsible for enabling one of ordinary skill in the art to make and use the invention. Clearly, if applicant has not set forth what prior art baseline configuration is being compared to, then clearly, one of ordinary skill in the art cannot know what purported benefits will occur relative to any other configuration. Applicant later argues that the reduction in the CO emissions is as much as 50% from the invention but again there is no baseline to determine what the benefits are relative to. Applicant argues that "reducing a size of an interface between fueled and unfueled regions" is part of the preamble and should not be subject to the enablement requirement. However, the examiner disagrees, as the claims

themselves are not only subject to the enablement requirement but the specification in and of itself is the basis for any enablement requirement.

10. In response to applicant's arguments with regard to the 103 rejection that the references fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., reducing the CO emission by up to 50%, that the interface between fueled and unfueled regions is minimal) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Moreover, applicant has inconsistently argued that the claims which claim "reducing a size of an interface between fueled and unfueled regions" is in the preamble and thus not given weight for the purposes of enablement but yet argues that the references do not have this feature and thus are patentable. Applicant cannot have it both ways.

11. Applicant argues that JP '941 teaches "conventional fuel staging," however, applicant has not defined in the claims with any particularity "non-conventional fuel staging." For the purposes of the claims the only difference between JP '941 and the claimed invention is that JP '941 teaches using 6 premixing nozzles and not 8. WO 98/25084 teaches using 8 premixing nozzles 2, 3 which are staged. It would have been obvious to one of ordinary skill in the art to apply the staging of JP '941 to a premixing combustor with more burners. In such a scenario, in keeping with JP '941 burner distribution pattern, all the nozzles would be distributed in pairs. Optionally, Munro is

cited as a teaching reference which shows that it is old and well known to distribute the premixers around the circumference in pairs as being equivalent to other patterns used for staging (col. 1, lines 16-29; col. 4, lines 6-17). It would have been obvious to one of ordinary skill in the art to provide the burners in pairs, as taught by Munro, as a well known or equivalent pattern configuration of fuel injectors employed in the art for staging the fuel.

12. Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax numbers for the organization where this application is assigned are 703-872-9306 for Regular faxes and 703-872-9306 for After Final faxes.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler, can be reached on 571-272-4834.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861. General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at http://www.uspto.gov/main/patents.htm

Ted Kim	Telephone	571-272-4829
Primary Examiner	Fax (Regular)	703-872-9306
March 17, 2005	Fax (After Final)	703-872-9306
Technology Center 3700 Receptionist	Telephone	703-308-0861
Patents Assistance Center	Telephone	800-786-9199